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NO. 3694 P. 1/8

OCT 23 2006

Docket No.: 13156-00043-US
(PATENT)

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Werner Reutemann et al.

Application No.: 10/572,783

Confirmation No.: N/A

Filed: March 21, 2006

Art Unit: N/A

For: METHOD FOR AVOIDING CORROSION

Examiner: Not Yet Assigned

LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

For the sake of completeness attached is a copy of the International Preliminary Report on Patentability for the PCT counterpart of the above application. It is noted that all of the documents cited therein have been previously made of record in a prior Information Disclosure Statement.

Dated:

Respectfully submitted,

By: [Signature]
Harold Pezzner

Registration No.: 22,112

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference B03/0216PC	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2004/010766	International filing date (day/month/year) 24 September 2004 (24.09.2004)	Priority date (day/month/year) 24 September 2003 (24.09.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant BASF AKTIENGESELLSCHAFT			

- This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
- This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.
- This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input checked="" type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/> Box No. VIII	Certain observations on the international application
- The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 740 14 35	Date of issuance of this report 12 June 2006 (12.06.2006)
	Authorized officer Agnes Wittmann-Regis Telephone No. +41 22 338 89 70

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

Translation

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference

B03/0216PC

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2004/010766

International filing date (day/month/year)

24.09.2004

Priority date (day/month/year)

24.09.2003

International Patent Classification (IPC) or both national classification and IPC

C07C209/86, C07C209/90, C07C211/04, C07C209/16

Applicant

BASF AKTIENGESELLSCHAFT

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/010766

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/010766

Box No. II

Priority

1. ☒ The following document has not yet been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2004/010766

Box No. V	Reasoned statement under Rule 43bis-1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims 1-8		YES
	Claims		NO
Inventive step (IS)	Claims 1-8		YES
	Claims		NO
Industrial applicability (IA)	Claims 1-8		YES
	Claims		NO
2. Citations and explanations:			
Reference is made to the following documents:			
<p>D1: PATENT ABSTRACTS OF JAPAN vol. 0061, No. 97 (C-128), 6 October 1982 & JP 57 108041 A (MITSUBISHI GAS)</p> <p>D2: EP-A-1 312 599 (BASF AG)</p> <p>D3: EP-A-0 037 695 (DU PONT)</p> <p>D4: CHEMICAL ABSTRACTS, vol. 55, No. 24, 1961, Abstract No.: 244489i</p>			
1. Novelty			
<p>D1 also discloses a method for obtaining monomethylamine, dimethylamine and trimethylamine from ammonia and methanol using 4 columns. The use of an alkali hydroxide solution is not described in the method according to D1.</p> <p>D2 discloses a method for separating water-containing crude amine mixtures from amine synthesis, using 4 columns. The obtaining of monomethylamine, dimethylamine and trimethylamine is not disclosed in D2.</p> <p>D2 also describes the use of sodium hydroxide solution, although not during a distillation, but rather during an</p>			

Form PCT/ISA/237 (Box No. V) (January 2004)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/010766

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

extraction.

D3 discloses a purification process for methylamines, with 2 columns, and the use of alkali hydroxide during the extraction.

D4 describes the use of NaOH for corrosion prevention in methylamine production plants.

The addition of alkali hydroxide to the feed of the third column is not disclosed in D1-D4.

The subject matter of claims 1-8 is therefore novel (PCT Article 33(2)).

2. Inventive step

The problem to be solved by the present invention can therefore be considered that of providing a method for avoiding corrosion in the columns of the distillation plant during methylamine production.

On the basis of the example, it is credible that the problem defined above has been solved by the technical method measures contained in claim 1.

The solution to this problem as proposed in claim 1 of the present application is based on an inventive step (PCT Article 33(3)) for the following reasons:

The prior art D1-D4 does not teach that the addition of alkali hydroxide to the feed of the third column would result in the avoidance of corrosion and blockage.

Claims 2-8 are dependent on claim 1 and therefore also meet the PCT requirements with regard to inventive step.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/010766

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

According to page 4, lines 29-30, the alkali may only be fed into the bottom or the stripping section of the second column. Claim 1 discloses only the addition of the alkali to the second column, without stating the feed point.

This contradiction between claim 1 and the description leads to doubt concerning the subject matter for which protection is sought, meaning that claim 1 is not clear (PCT Article 6).

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